



GREATER CINCINNATI  
**WATER WORKS**

*A Service of The City of Cincinnati*

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2007 ANNUAL REPORT • BUILDING ON THE PAST, BUILDING FOR THE FUTURE



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## MAYOR

Mark Mallory

## MEMBERS OF CITY COUNCIL

Jeff Berding  
Chris Bortz  
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James R. Tarbell\*  
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*\*During 2007, Roxanne Qualls replaced James R. Tarbell*

## CITY MANAGER

Milton R. Dohoney, Jr.

## SENIOR MANAGEMENT

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City of Cincinnati is an Equal Opportunity/Affirmative Action Employer

*"Over and above all else,  
Cincinnati cannot afford to fail  
in recognition of the magnificent  
work accomplished in its behalf  
by the Waterworks Commission.  
They have (built) their own  
monument and it is a splendid  
and lasting one."*

The Cincinnati Enquirer  
1908



## JUST IMAGINE...

In 1839, the City of Cincinnati bought a local water company — the first publicly owned utility in the nation. In the early 1900s, people throughout Cincinnati could turn on the tap and have water delivered right to their homes, making them the envy of many other cities in the United States. Even though the system was a marvel for its time, it was not perfect: The water was only as fresh and pure as the Ohio River on that day.

In 1907, the Cincinnati Water Works completed the California Treatment Plant (later renamed the Richard Miller Treatment Plant) which forever changed what Cincinnati and the nation believed water should look, taste, and smell like. By taking in Ohio River water and using the most advanced purification techniques available, diseases such as typhoid, cholera, and dysentery quickly disappeared.

Today Greater Cincinnati Water Works (GCWW) remains committed to providing customers with a plentiful supply of the highest quality drinking water in a financially responsible manner. GCWW constantly monitors water quality and adjusts treatment processes in order to keep the supply of water flowing to customers' homes and the fire hydrants that guard them.





## PROVIDING A SAFE, CLEAN & PLENTIFUL WATER SUPPLY

The California Plant (later renamed the Richard Miller Treatment Plant) was completed in 1907 at a cost of approximately \$10 million dollars, an enormous investment that underscored the commitment of Cincinnati Water Works to bring safe water to our customers. Today, we continue to make improvements to our facilities and infrastructure to deliver the highest quality water possible.

### MILLER & BOLTON UPGRADES

Improvements to the alum storage facility and alum feed system were completed at the Miller Plant in 2007. These improvements will help increase the current and future capacity as well as improve reliability of the alum feed system, which helps remove sediment from the water. Additionally, GCWW completed the three-year filter rehabilitation project at the Miller Plant. A surveillance program for sand filters was also instituted in 2007 to inspect and evaluate backwash procedures for all the filters at the plant.

At the Bolton Plant, the well field expansion project was fully completed during 2007, and included the addition of two new wells in the existing well field. The completion of this project means there is now increased pumping capacity; enough to supply 40 million gallons of water a day. Other necessary operational changes were completed at the Bolton Plant to increase production during the winter months. This change expands the area that can be served by Bolton's warm well water, which helps prevent leaks and breaks from occurring during the winter months.

### CARBON REGENERATION

The Miller Plant is one of a few water treatment plants in the nation that includes Granular Activated Carbon (GAC) as part of the daily treatment process. GAC has been recognized as the best available technology for removing the most common chemicals found in river spills. Carbon regeneration, the process of cleaning the GAC, is significantly expensive due to the cost of natural gas and carbon. By monitoring and evaluating the number of contactors that are regenerated, GCWW saved more than \$750,000 in 2007 without affecting water quality.



FIG. 4.—INTAKE-PIER CAISSON, WITH COFFERDAM FRAMEWORK ABOVE, READY FOR LAUNCHING

*"Four swirling saffron floods within two months and yet the water that has been drawn through any hydrant in the city has been clear and pure as if it had been distilled or made by melting snow."*

The Cincinnati Enquirer  
1908

## PIPE REPAIR, REHABILITATION & PREVENTATIVE MAINTENANCE

Within the GCWW system, the pipes, or water mains, that run below the streets and curbs make it possible for customers to get water whenever they turn on the tap. Weather extremes, such as the cold winter of 2007 followed by the severe drought in the summer months, place enormous stress on water mains causing them to break or leak occasionally. To help prevent this, GCWW has a nationally recognized preventative maintenance program in place to design, build and rehabilitate water mains in a proactive manner.

During 2007, design plans were completed for 59 new water main projects spanning nearly 37 miles with an estimated value of more than \$35 million. In addition, more than 35 miles of new water mains were constructed, ranging in size from 6 to 42 inches in diameter. This included 6,600 ft. of mains in a Linn Street/Dalton Avenue project, which was designed to meet contractual obligations to provide water to customers in Northern Kentucky.

Beyond designs and new construction, GCWW also has a goal to replace and rehabilitate water mains at a total annual rate of 1% of the system, or 30 miles per year. This work is driven by water main breaks and leaks, customer outages and impacts, street improvements, fire flow, system pressures and other related items. In 2007, more than 700 water mains were evaluated for replacement, a 90% increase from 2006 due primarily to a higher number of street improvements reviewed by GCWW. Maintenance data is continually monitored and analyzed to determine if there are any abrupt changes in water main break histories. Any issues are addressed quickly to keep customer satisfaction high while keeping maintenance repair costs low.

## RESEARCH UPDATES

GCWW has been in the forefront of water treatment technology for many years. Keeping ahead of the research curve is crucial to providing customers with the highest quality water. This past year, a preliminary design was completed for a post-GAC Ultraviolet (UV) disinfection facility at the Miller Plant. A study is currently underway to assess the flexibility of the UV design to allow for the future adoption of new technologies to control emerging contaminants.

Also during 2007, GCWW continued to partner with other leading organizations to further add to the body of

research on water quality and treatment techniques. This included continued collaboration with several groups based in the Netherlands, as well as the American Water Works Research Foundation (AwwaRF), a leading research organization for the drinking water industry. As a member of AwwaRF, GCWW participates in general collaborative research efforts. AwwaRF awarded GCWW nearly \$600,000 in grants during 2007 to conduct research.

## NEW DAILY PUMP RECORD SET

The amount of water pumped throughout 2007 was higher than previous years due to drought-like conditions for GCWW's service area over the summer months. This resulted in a new record for the highest system pumpage of any year. The two GCWW water treatment plants delivered nearly 53.4 billion gallons of high quality finished water to the distribution system. This surpassed the previous pumpage record of just over 52 billion gallons set in 1988 and represented an increase of more than 11% over 2006 totals. The average daily quantity of water delivered to the entire distribution system in 2007 was 146.3 million gallons, with a maximum one-day pumpage on August 25, when more than 229 million gallons were delivered. In addition, billed water consumption also increased almost 11%, with a billed water revenue increase of 15% due to additional water sales and a slight rate increase that went into effect in early 2007.





## PROTECTING SOURCE WATER & DRINKING WATER



GCWW has always been involved in environmental conservation and water preservation efforts, and has several barriers between potential pollution and source water. The Ohio River Valley Water Sanitation Commission (ORSANCO), in conjunction with water utilities along the Ohio River, developed an early warning organic detection system. This was the first such system in the United States. The system warns treatment plants downstream about spills so they can take preventative measures before the spill reaches their intakes. During 2007, GCWW worked with the Ohio Environmental Protection Agency (EPA) and ORSANCO to develop a source water protection plan template. The protection plan can be used by all utilities along the Ohio River and is designed to prevent and address pollution found in the river.

Cincinnati has also recognized the vulnerability of the Great Miami Aquifer which is used by GCWW's Bolton Plant. The Bolton Plant supplies water to the northwestern area of Hamilton County and parts of Warren and Butler Counties. GCWW has worked hard as a member of the Hamilton to New Baltimore Groundwater Consortium to develop an award-winning source water protection program to preserve the aquifer. This cooperative program among seven different water suppliers includes land use management through local overlay zoning and industry registration, public education and an extensive early warning ground water monitoring system.

In yet another source water protection effort, volunteers representing GCWW joined with municipal leaders, community volunteers and private organizations to help clean the riverbanks of the Great Miami River and minimize contamination of the Bolton well field. During the day-long effort, GCWW volunteers worked on a 1.5 mile stretch of the river, removing approximately a half ton of trash.

GCWW actively worked with the U.S. EPA during the past year on Water Security Initiative projects. One vital part of the Contamination Warning System on which GCWW worked was the Customer Complaint Surveillance component. Customer complaint calls received in the GCWW call center may provide the earliest indication of a contamination incident in the system. This can alert GCWW to conditions that warrant investigation and GCWW can take appropriate action.

***Did you know? The flood of 1937 caused the first and only shutdown of the GCWW since the inception of the California Treatment Plant 100 years ago.***



*In the late 1850's, meters were first installed at customer houses and businesses to allow usage-based billing, a significant achievement for the time. With the completion of the H2O Radio project, GCWW personnel took the last manual meter reading in 2007.*

# MANAGING THE BUSINESS WISELY

At GCWW, we recognize the enormous amount of trust our customers place in us to deliver high-quality, safe water and to do so at a reasonable cost. Maintaining public trust means keeping our customers at the forefront of all that we do.

## ACHIEVING SELF-CERTIFICATION

In 2007, GCWW entered into a self-certification agreement with the Ohio EPA. This agreement allows GCWW to self-approve all plans in the distribution system including all system expansion water mains, significant water main upgrades, pump station plans and storage tanks. One of only a few self-certification programs in the state, it improves customer service and saves costs by expediting project approvals. Nearly 40 projects were reviewed and self-certified during 2007.

## EXPLORING ALTERNATIVE FUELS

As of 2007, nearly 13% of GCWW's metered fleet is now powered by alternative fuels, including a fully electric forklift, 7 propane-powered units, 32 vehicles that use ethanol/gasoline blend and a new hybrid SUV. While there is no one alternative power that meets all needs, GCWW continues to explore available options in an effort to remain a good steward of the earth's resources.

## AUTODEBIT ARRIVES

Early in 2007, GCWW introduced a new payment option feature called Auto Debit, which allows customers to register to make Automated Clearing House (ACH) payments from their checking or savings accounts on their invoice due date. This feature makes paying bills more convenient for customers who choose this payment option.

## ASSET MANAGEMENT & PREVENTATIVE MAINTENANCE PROGRAM

GCWW started working with several consultants in mid-2007 to evaluate the hydraulics, regulatory compliance, and infrastructure of the Miller and Bolton Plants. Audits were conducted to determine expected capacity from each treatment process, how future water quality regulations will affect each plant, and the condition, reliability and criticality of specific equipment assets. Results of the audit are expected back in 2008

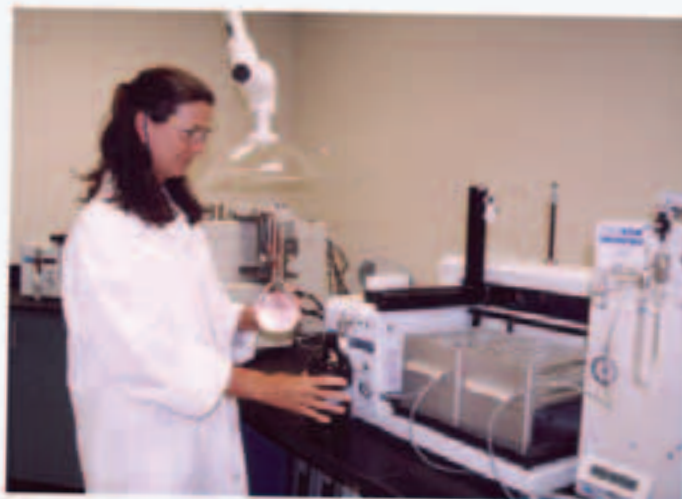
and should lead to a Master Plan document that provides forward-thinking recommendations for capital improvements at both plants.

## 2007 BOND SALES

GCWW received \$72 million from the sale of revenue bonds in 2007, an amount which is slated to finance a portion of its capital program over the next two years. As a result of the department's accomplishments, Moody's Investor Services upgraded their rating of GCWW to Aa1 (from Aa2) and Standard and Poor's confirmed their rating of AA+. Both ratings, the second highest possible from these agencies, are only achieved by 5% of the water/sewer agencies in the country. Higher credit scores may lower the rate paid on the bonds, resulting in lower costs for GCWW and ultimately, the customers.

## AUTOMATIC METER READING (H2O RADIO)

On September 21, 2007, a GCWW Meter Reader completed the final manual meter reading route, signaling the completion of one of the largest water Automatic Meter Reading (AMR) projects in North America. This project, known as H2O Radio, was completed on time and under budget. H2O Radio enables all meters to be read remotely by radio signal. Prior to the installation of AMR, the number of meters that could be read successfully was approximately 85%. GCWW now achieves nearly 99% success in reading meters thanks to the H2O Radio project. For customers, this improvement means consistent, timely and accurate bills as well as improved safety since keys can remain with the homeowner. To date, operational savings related to the implementation of H2O Radio are on target to be more than \$22 million by 2012.





## HELPING OUR NEIGHBORS

What does it mean to help our neighbors? It means lending a hand when they have an emergency... giving back to the communities in which we live and work... and sharing what we know to improve how water is treated and distributed for the next generation.

### LENDING A HELPING HAND

On a cold day in mid-January of 2007, many residents of the Village of Cleves found their water service interrupted. A portion of their system was without water because of a broken water main under a flooded creek near the Great Miami River. Working under an emergency standby contract with GCWW, Cleves determined that temporary service could be provided to its customers by extending a fire hose from the end of GCWW's system to the first Cleves fire hydrant. After hoses supplied by area fire departments were stretched the 1000 foot distance, GCWW installed proper check valves to ensure system integrity, energized the hoses and began delivering water to approximately 60 homes. The temporary system remained in place for nearly five days until the necessary repairs to the original main could be completed.

### SERVING OTHERS

Beyond the emergency assistance provided to the Cleves Water Utility, GCWW is sometimes called upon to help other local water utilities as well. During the drought of 2007 Indian Hill, Addyston, and Warren County requested and received additional emergency water service to meet the needs of their customers.

### SPECIAL EVENT SUPPORT

GCWW annually provides water service for numerous special events. In 2007, GCWW supported the Taste of Cincinnati, Paddle Fest on the Ohio, Juneteenth, Ault Park Independence Day Celebration, Riverfest, Oktoberfest, Walnut Hills Festival and the AIDS Walkathon. In addition to basic water service, GCWW also provided water service to "Henry the Hand," a station that promotes the importance of washing hands.



*In 1906, Cincinnati began service outside the city boundaries, achieving full service to Hamilton County by 1924. In 1955, a 30-year contract added unincorporated areas of Hamilton County and 8 other communities to the system.*

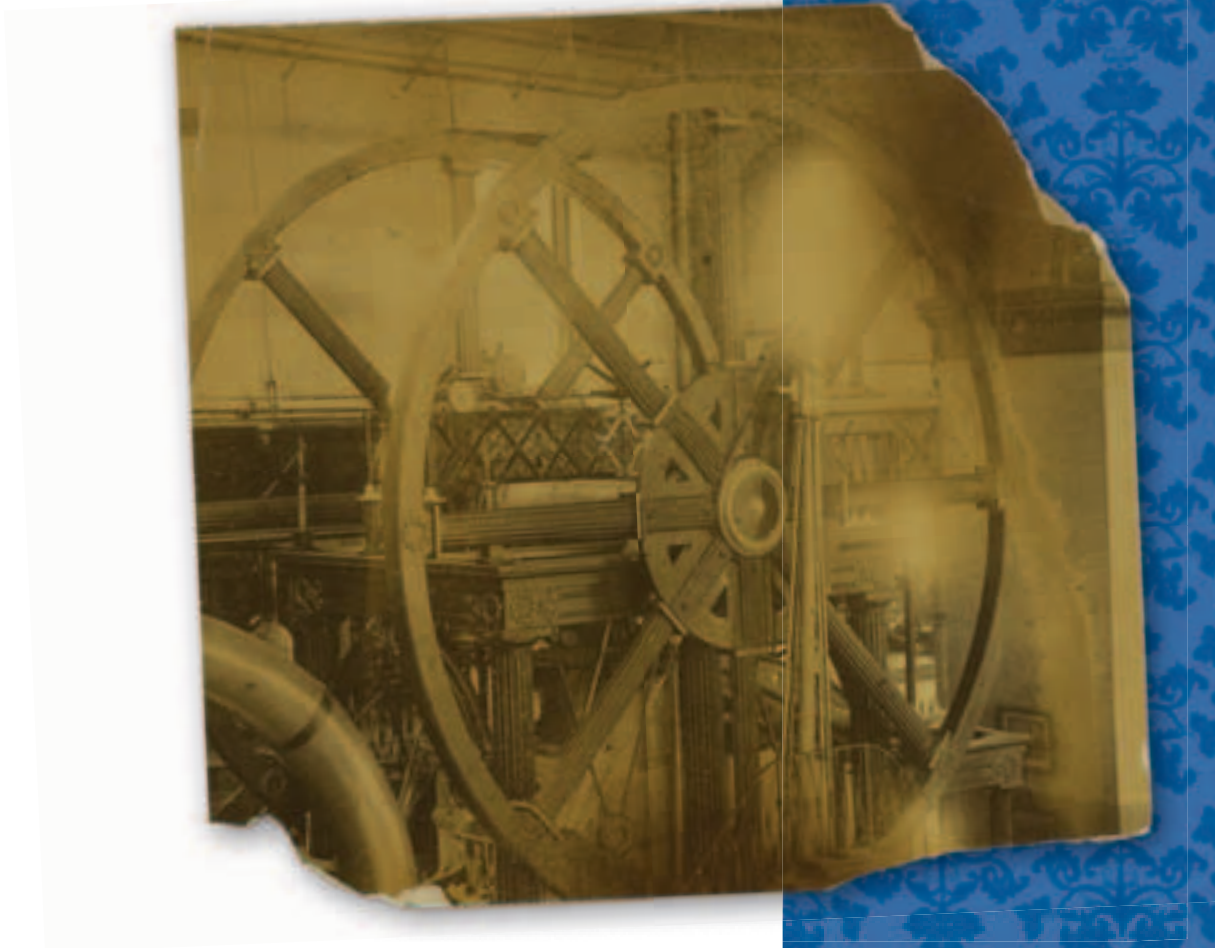


## HEAVY RESCUE TRAINING

In summer 2007, nearly 25 firefighters from Hamilton County Urban Search and Rescue participated in three separate day-long training classes on the various methods of trench shoring at the Miller Plant. Designed to prepare the teams to respond to construction job site emergencies, the training helped familiarize trainees with the various methods of supporting a trench to prevent further collapse so rescue teams can enter safely.

## HISTORIC MUSIC HALL HYDRANT RELOCATION

GCWW had a unique opportunity during 2007 to work on a fire hydrant associated with historic Music Hall. Because the hydrant was located near the shipping docks of Music Hall's storage facility, it was frequently broken. GCWW personnel and Cincinnati Fire Department representatives worked together to find a better location for the fire hydrant across the street. The hydrant was moved a total of 27 feet, a long distance for a hydrant relocation, which is usually 4 to 12 feet. In order to minimize disruption, GCWW worked closely with the Cincinnati Opera, a trucking company, and CSX Railroad to coordinate the best time to shut the water off and close the area of the street where the work needed to be done. The crew that worked on the relocation was complimented for their efficiency and excellent work collaborating with all the different organizations involved.





## SERVICE AREA MAP

*"It is by far the greatest and most important enterprise this city has started in a decade, and it is one which builds not only for the present, but for the next century."*

Colonel W.B. Melish

When Water Works Trustee Colonel W.B. Melish delivered these words to a gathering of area business leaders in the late 19<sup>th</sup> century, he could not have known that they would still ring true in 2007. Today, the Miller Plant and the Bolton Plant serve as the basis for a network that stretches farther in every direction than Melish and his associates ever imagined. As shown on the map to the right, GCWW continues to add new service areas and customers to its distribution system.

### Customers Speak Up

*Taking care of our customers and their needs is at the very heart of what we do at GCWW and we love to get feedback. Here is a sampling of what we heard in 2007:*

*"Your integrity was above reproach. You not only did what you promised you would do, you also did it in a timely manner. Your patience, hard work and willingness to work things out were a major reason for the success of the project."*

R.C., Cincinnati

*"Mr. Russell called today and said he is 94 years young, has been drinking GCWW water all his life and says it is the best tasting water anywhere."*

GCWW Call Center Report

*"Your staff's prompt arrival made a huge difference in our ability to suppress the fire in the original fire building and contain it... This made it possible to limit the amount of disruption of lives and commerce within our city."*

Robert Wright — City of Cincinnati Fire Chief

*"I must commend your employees. What a breath of fresh air!"*

Customer e-mail

### OHIO RIVER SERVICE AREA

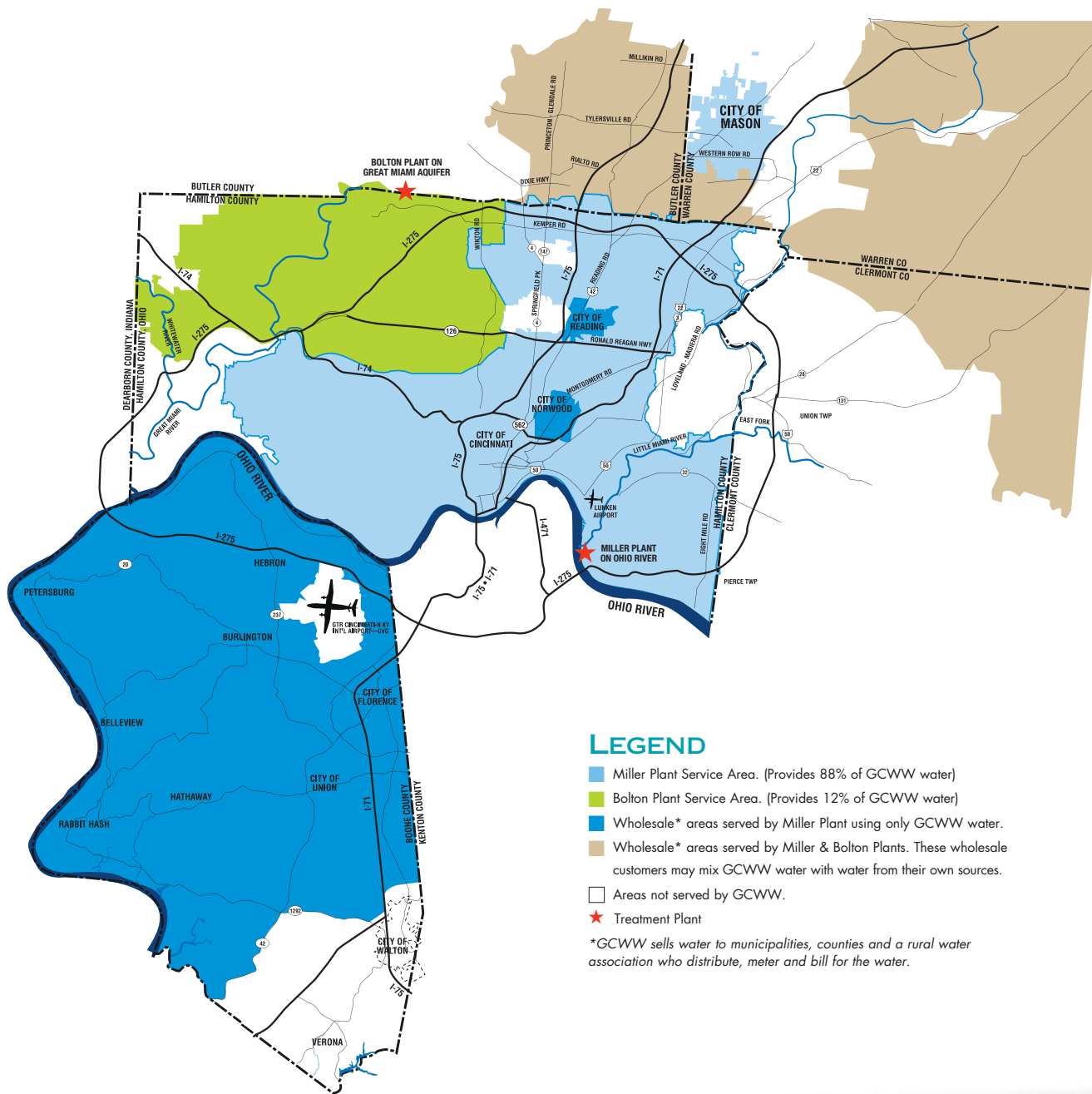
Amberley Village	Golf Manor	Oakley
Anderson Township	Green Township*	Pleasant Ridge
Avondale	Greenhills*	Price Hill
Blue Ash*	Hyde Park	Roselawn
Bond Hill	Kennedy Heights	St. Bernard
California	Kenwood	Sayler Park
Cherry Grove	Lincoln Heights	Sharonville*
Cheviot*	Mack*	Silverton
Clifton	Madeira	Springdale*
Corryville	Madisonville	Sycamore Township*
Covedale	Mariemont	Symmes Township
Cumminsville	Mason*	Walnut Hills
Deer Park	Miami Heights*	West End
Delhi & Delhi Township	Montgomery	Western Hills*
Downtown	Mt. Airy*	Westwood*
East End	Mt. Auburn	Winton Place
Elmwood Place	Mt. Lookout	Woodlawn
Evanston	Mt. Washington	
Evendale	Newtown	
Fairfax	Northside	

### GREAT MIAMI AQUIFER SERVICE AREA

Blue Jay	Forest Park*	Northgate
Colerain Township	Miamitown	Pleasant Run
College Hill*	Monfort Heights*	Springfield Township
Crosby Township	Mt. Healthy*	Venice Gardens
Dent*	New Burlington	White Oak*
Finneytown*	North College Hill	White Water Township

\*These communities may get water from both the Miller and Bolton Plants.





GENERAL OPERATIONAL DATA		
	Miller Plant	Bolton Plant
<b>Raw Water Pumped</b>	47,631,262,200 Gallons	6,667,261,900 Gallons
<b>Finished Water Delivered for Consumption</b>	47,186,396,800 Gallons	6,223,994,000 Gallons
<b>Filtered Water Used in Washing Filters</b>	805,687,800 Gallons	47,671,800 Gallons
% Used – Average	1.7%	0.8%
% Used – Maximum Month	(June) 2.7%	(September) 1.1%
% Used – Minimum Month	(April) 0.9%	(April) 0.6%
<b>Total Number of Filter Washes</b>	5,696	289
Maximum Month	(June) 866	(September) 40
Minimum Month	(April) 223	(April) 16
<b>Period of Filter Service, Average Hours</b>	40.6 Hours	156.9 Hours
Maximum Month	(April) 62.8 Hours	—
Minimum Month	(June) 24.5 Hours	—
<b>Finished Water Delivered for Consumption</b>	47,186,396,800 Gallons	6,223,994,000 Gallons
Maximum – Gallons per Day	(August 11) 201,371,000 Gallons per Day	(August 26) 29,249,900 Gallons per Day
Minimum – Gallons per Day	(December 30) 88,891,300 Gallons per Day	(December 30) 12,681,200 Gallons per Day
Average/Day/Year	129,277,799 Gallons	17,052,038 Gallons
Maximum Month	(August) 5,293,898,800	(August) 729,231,000 Gallons
Average/Day/Maximum Month	170,770,929 Gallons	25,523,581 Gallons
Minimum Month	(February) 3,128,757,400 Gallons	(February) 417,976,500 Gallons
Average/Day/Minimum Month	100,927,658 Gallons	13,932,550 Gallons



MICROBIOLOGICAL DATA					
	Total Coliform Bacteria			Giardia Cysts per 100 Liters	Cryptosporidium Oocysts per 100 Liters
Finished Water	% Positive samples	Maximum Monthly %	Minimum Monthly %		
Miller Finished Water	0%	0%	0%	none detected	none detected
Bolton Finished Water	0%	0%	0%	—	—
GCWW Distribution System	< MCL*	< MCL*	< MCL*	—	—
<b>Miller Raw Water – Detections</b>	Coliform Bacteria per 100 Milliliters				
% Positive Samples	100%			15%	7.7%
Average of Detections	786			59	5.9
Maximum Monthly Average	1,917			59	3.0
Maximum Day	4,838			110	5.9
Minimum Monthly Average	15			none detected	none detected
Minimum Day	4			none detected	none detected
<b>Bolton Raw Water – Detections</b>					
% Positive Samples	0%			—	—
Average	none detected			—	—
Maximum Monthly Average	none detected			—	—
Maximum Day	none detected			—	—
Minimum Monthly Average	none detected			—	—
Minimum Day	none detected			—	—
	<b>A total of 3,611 microbiological samples were analyzed</b>			<b>A total of 24 samples were analyzed</b>	<b>A total of 24 samples were analyzed</b>

\*OEPA MCL for total coliforms requires that no more than 5.0 percent of the total number of samples during a month are total coliform-positive.  
Maximum Contaminant Level or MCL: The highest level of a contaminant that is allowed in drinking water.

# WATER QUALITY COMPARISONS

RAW WATER (COMPARISON OF SELECTED PARAMETERS)				
	Miller Plant		Bolton Plant	
	Average	Range	Average	Range
Turbidity (NTU)	39	0.75 – 275	0.06	0.04 – 0.35
Total Alkalinity (as CaCO <sub>3</sub> )	66	48 – 80	222	205 -242
Total Hardness (as CaCO <sub>3</sub> )	134	91 – 177	291	254 - 326
Calcium (as Ca)	37	30 – 44	80	71 - 90
Magnesium (as Mg)	10	6 – 13	23	16 - 30
pH (Units)	7.8	7.5 – 8.8	7.4	7.3 – 7.6
Chloride	37	20 – 57	57	42 - 76
Fluoride	0.19	0.08 – 0.30	0.30	0.25 – 0.36
Sulfate	76	50 – 98	65	51 - 76
Nitrate (as NO <sub>3</sub> -N)	1.06	0.53 – 1.78	1.35	0.57 – 2.14
Iron (as total Fe)	3.42	3.42 – 3.42	< 0.20*	<0.20 - < 0.20*
Manganese (as total Mn)	0.20	0.20 – 0.20	< 0.13*	< 0.13 - < 0.13*
Sodium	17	13 – 23	160*	160 – 160*
Total Solids	277	185 – 436	403*	403 – 403*
Total Dissolved Solids	240	135 – 345	403*	403 – 403*
Total Organic Carbon	2.52	1.92 – 3.84	0.89	0.78 -1.07

In mg/l except where noted

\*Analysis not performed in 2007. Most recent data reported.



## FINISHED WATER (COMPARISON OF SELECTED PARAMETERS)

	Miller Plant		Bolton Plant	
	Average	Range	Average	Range
<b>Turbidity (NTU)</b>	0.07	0.04 - 0.10	0.05	0.04 – 0.19
<b>Total Alkalinity (as CaCO<sub>3</sub>)</b>	72	52 – 89	77	65 – 157
<b>Total Hardness (as CaCO<sub>3</sub>)</b>	140	100 – 178	148	123 – 168
<b>Calcium (as Ca)</b>	39	33 – 44	25	18 – 36
<b>Magnesium (as Mg)</b>	10	5 – 14	21	13 – 25
<b>pH (Units)</b>	8.6	8.4 – 8.9	9.2	8.6 – 9.8
<b>Chloride</b>	39	20 – 58	57	42 – 75
<b>Fluoride</b>	0.96	0.84 – 1.10	0.98	0.81 – 1.08
<b>Sulfate</b>	84	63 – 103	63	53 – 72
<b>Nitrate (as NO<sub>3</sub>-N)</b>	1.11	0.66 – 1.56	1.57	0.65 – 2.51
<b>Iron (as total Fe)</b>	0.05	0.02 – 0.05	0.05	0.02 – 0.05
<b>Gross Beta (pCi/L)</b>	24	< 4 – 24	6	< 4 – 6
<b>Manganese (as total Mn)</b>	< 0.002	< 0.002 – 0.002	< 0.002	< 0.002 – 0.002
<b>Sodium</b>	32	18 - 43	28	18 - 40
<b>Total Solids</b>	282	138 – 615	271	221 – 354
<b>Total Dissolved Solids</b>	282	138 – 615	271	221 – 354
<b>Total Organic Carbon</b>	0.91	0.30 – 2.0	0.75	0.63 – 0.87
<b>Phosphate (as PO<sub>4</sub>-P)</b>	0.16	0.10 – 0.23	0.15	0.12 – 0.21
<b>Chlorine Residual, Free</b>	1.13	0.85 – 1.65	1.19	0.97 – 1.76
<b>Chlorine Residual, Total</b>	1.20	0.93 – 1.73	1.27	1.03 – 1.84

In mg/l except where noted

THE FOLLOWING WERE NOT DETECTED IN OUR FINISHED WATER: \* Inorganics: Antimony, Arsenic, Asbestos, Barium, Beryllium, Cadmium, Chromium, Cyanide, Mercury, Nickel, Nitrite, Selenium, Thallium, Silver, Zinc. Pesticides and Other Synthetic Organic Compounds: Alachlor, Atrazine, Benzo[a]pyrene, Carbofuran, Chlordane(total), Dalapon, Dibromochloropropane, Di[2-ethylhexyl] adipate, Di[2-ethylhexyl] phthalate, 2,4-D, Dinoseb, Diquat, Endothall, Endrin, Ethylene dibromide, Glyphosate, Heptachlor, Heptachlor epoxide, Hexachlorobenzene, Hexachlorocyclopentadiene, Lindane, Methoxychlor, Oxamyl (Vydate), Pentachlorophenol, Picloram, PCB's (total), Simazine, 2,3,7,8-TCDD (Dioxin), Toxaphene, 2,4,5-TP (Silvex), Aldicarb, Aldrin, Butachlor, Bromacil, Carbaryl, Dicamba, Dieldrin, 3-Hydroxycarbofuran, Methomyl, Metolachlor, Metribuzin, Propachlor. Volatile Organic Chemicals: Trichloroethene, Benzene, Carbon tetrachloride, 1,2-Dichloroethane, Vinyl Chloride, 1,1-Dichloroethene, 1,1,1-Trichloroethane, 1,4-Dichlorobenzene, cis-1,2-Dichloroethene, Tetrachloroethene, 1,2-Dichlorobenzene, trans-1,2-Dichloroethene, Chlorobenzene, Styrene, Toluene, Xylenes (total), 1,2-Dichloropropane, 1,1,2-Trichloroethane, Dichloromethane, Ethylbenzene, 1,2,4-Trichlorobenzene, 2,2-Dichloropropane, Dichlorodifluoromethane, Dibromomethane, 1,3-Dichloropropane, Chloromethane, Bromomethane, Bromochloromethane, 1,2,3-Trichloropropane, 1,1,1,2-Tetrachloroethane, 1,1,2,2-Tetrachloroethane, 1,1-Dichloropropene, Chloroethane, 1,3-Dichloropropene, Hexachlorobutadiene, Naphthalene, tert-Butylbenzene, 4-Isopropyltoluene, Trichlorofluoromethane, sec-Butylbenzene, 1,1-Dichloroethane, Bromobenzene, Isopropylbenzene, n-Propylbenzene, 2-Chlorotoluene, 4-Chlorotoluene, 1,3-Dichlorobenzene, 1,2,3-Trichlorobenzene, 1,2,4-Trimethylbenzene, n-Butylbenzene, 1,3,5-Trimethylbenzene. Radiological: Combined Radium (pCi/L), Alpha-Gross (pCi/L), Strontium-90 (pCi/L).

\*Not all analysis performed in 2007. Most recent data reported.

# WATER QUALITY DATA

The following tables show the substances reported in the GCWW 2007 Safe Drinking Water Report, which was prepared to meet the EPA's National Primary Drinking Water Regulation for Consumer Confidence Reports. In 2007, GCWW met or exceeded all state and federal health standards, as it always has. For more information on the potential health effects of various substances, call the EPA's Safe Drinking Water Hotline at 1(800) 426-4791 or visit [www.epa.gov/safewater/hfacts.html](http://www.epa.gov/safewater/hfacts.html).

Consumers may request printed copies of the Safe Drinking Water Report or view the entire GCWW 2007 Safe Drinking Water Report at [www.cincinnati-oh.gov/gcww](http://www.cincinnati-oh.gov/gcww).

**Regulated Contaminants** Substances subject to a Maximum Contaminant Level (MCL), Action Level (AL) or Treatment Technique (TT)\*. These standards protect drinking water by limiting the amount of certain substances that can adversely affect public health and are known or anticipated to occur in public water systems.

2007 REPORT			MILLER WATER (FROM THE OHIO RIVER)				Typical Source of Contamination (for more details, visit www.epa.gov/safewater/hfacts.html)
Substance (Unit)	Maximum Allowed (MCL*)	MCLG*	Highest Compliance Level Detected	Range of Detections	Violation	Year Sampled	
Fluoride (ppm)	4	4	0.99	0.84 - 1.10	No	2007	Additive which promotes strong teeth. May come from erosion of natural deposits.
Nitrate (ppm)	10	10	1.56	0.66 - 1.56	No	2007	Runoff from fertilizer use, leaching from septic tanks, sewage, erosion of natural deposits.
TTHMs (ppb) [Trihalomethanes]	80	na	37.0	15.3 - 73.3	No	2007	Byproduct of drinking water chlorination.
HAA5 (ppb) [Haloacetic Acids]	60	na	14.6	4.44 - 21.2	No	2007	Byproduct of drinking water chlorination.
TTHMs (ppb) IDSE	na	na	na	34.7 - 74.9	na	2007	This data is included to show special monitoring performed to determine new sample locations. Byproduct of drinking water chlorination.
HAA5 (ppb) IDSE	na	na	na	3.10 - 14.4	na	2007	
Gross Beta (pCi/L)	50	0	24	nd - 24	No	2007	Decay of natural and man-made deposits. (EPA considers 50 pCi/L to be the level of concern.)
Turbidity (NTU)	TT1 < 1 NTU Max & TT2 < 0.3 NTU 95% of the time	na na	0.10 100%<0.3 NTU	0.04 - 0.10	No	2007	Soil runoff.
Lead <sup>2</sup> (ppb)	AL = 15	0	90th percentile 8.7	na	No	2007	May come from erosion of natural deposits. There is no detectable lead in our water as it leaves the treatment plants. However, corrosion of household plumbing is a source of lead and copper contamination. GCWW tests water samples collected at customer taps, as required by the Safe Drinking Water Act to ensure safe water.
Copper <sup>2</sup> (ppm)	AL = 1.3	1.3	90th percentile 0.0355	na	No	2007	
			(0 out of 103 samples tested were > the AL)				
Total Organic Carbon	TT <sup>1</sup>	na	2.18	1.55 - 3.13	No	2007	Naturally present in the environment.
Total Chlorine <sup>2</sup> (ppm)	MRDL=4	MRDLG=4	0.98	0.87 - 1.08	No	2007	Water additive used to control microbes.
Total Coliform Bacteria <sup>2</sup> (% positive)	5%	0	0.3% <sup>3</sup>	0 - 0.3%	No	2007	Naturally present in the environment.
E. coli (number positive)	MCL <sup>4</sup>	0	1 <sup>3</sup>	na	No	2007	Human and animal fecal waste.
Barium (ppm)	2	2	nd	na	No	2007	Erosion of natural deposits; Discharge of drilling wastes; Discharge from metal refineries.

## Foot Notes

1 The value reported under "Highest Compliance Level Detected" for Total Organic Carbon (TOC) is the lowest ratio between percentage of TOC actually removed to the percentage of TOC required to be removed. A value of greater than one (1) indicates that the water system is in compliance with TOC removal requirements. A value of less than one (1) indicates a violation of the TOC removal requirements. 2 Miller and Bolton were considered as one distribution system for regulatory purposes by Ohio EPA during 2007. Data listed for each system represents the combined distribution system. 3 In 2007 only 2 of 3,611 distribution samples were positive for coliform bacteria and only one of these was E. coli positive. All repeat samples were negative. 4 A routine sample and a repeat sample are total coliform positive and one is also fecal coliform or E. coli positive.

## Abbreviations

ppb: parts per billion or micrograms per liter ppm: parts per million or milligrams per liter nr: not regulated na: not applicable NTU: Nephelometric Turbidity Unit, used to measure clarity in drinking water nd: not detectable at testing limits pCi/L: picoCuries per liter, a measure of radioactivity in water TTHMs: Total Trihalomethane HAA5: Haloacetic Acids



2007 REPORT			BOLTON WATER (FROM THE GREAT MIAMI AQUIFER)				Typical Source of Contamination (for more details, visit www.epa.gov/safewater/hfacts.html)
Substance (Unit)	Maximum Allowed (MCL*)	MCLG*	Highest Compliance Level Detected	Range of Detections	Violation	Year Sampled	
Fluoride (ppm)	4	4	1.01	0.81 - 1.08	No	2007	Additive which promotes strong teeth. May come from erosion of natural deposits.
Nitrate (ppm)	10	10	2.45	0.65 - 2.45	No	2007	Runoff from fertilizer use, leaching from septic tanks, sewage, erosion of natural deposits.
THMs (ppb) [Trihalomethanes]	80	na	30.0	17.4 - 57.4	No	2007	Byproduct of drinking water chlorination.
HAA5 (ppb) [Haloacetic Acids]	60	na	11.0	3.55 - 17.3	No	2007	Byproduct of drinking water chlorination.
THMs (ppb) IDSE	na	na	na	38.0 - 38.0	na	2007	This data is included to show special monitoring performed to determine new sample locations. Byproduct of drinking water chlorination.
HAA5 (ppb) IDSE	na	na	na	7.97 - 7.97	na	2007	
Gross Beta (pCi/L)	50	0	6	nd - 6	No	2007	Decay of natural and man-made deposits. (EPA considers 50 pCi/L to be the level of concern.)
Turbidity (NTU)	TT1 < 1 NTU Max & TT2 < 0.3 NTU 95% of the time	na na	nr	nr	na	na	Soil runoff.
Lead <sup>2</sup> (ppb)	AL = 15	0	90th percentile 8.7	na	No	2007	May come from erosion of natural deposits. There is no detectable lead in our water as it leaves the treatment plants. However, corrosion of household plumbing is a source of lead and copper contamination. GCWW tests water samples collected at customer taps, as required by the Safe Drinking Water Act to ensure safe water.
			(6 out of 103 samples tested were > the AL)				
Copper <sup>2</sup> (ppm)	AL = 1.3	1.3	90th percentile 0.0355	na	No	2007	
			(0 out of 103 samples tested were > the AL)				
Total Organic Carbon	TT <sup>1</sup>	na	nr	nr	na	na	Naturally present in the environment.
Total Chlorine <sup>2</sup> (ppm)	MRDL=4	MRDLG=4	0.98	0.87 - 1.08	No	2007	Water additive used to control microbes.
Total Coliform Bacteria <sup>2</sup> (% positive)	5%	0	0.3 % <sup>3</sup>	0 - 0.3 %	No	2007	Naturally present in the environment.
E. coli (number positive)	MCL <sup>4</sup>	0	1 <sup>3</sup>	na	No	2007	Human and animal fecal waste.
Barium (ppm)	2	2	0.0106	na	No	2006	Erosion of natural deposits; Discharge of drilling wastes; Discharge from metal refineries.

**Unregulated Contaminants** Substances for which EPA requires monitoring to determine where certain substances occur and whether it needs to regulate those substances.

2007 REPORT		MILLER WATER				BOLTON WATER				Typical Source of Contamination
Substance (Unit)	MCLG*	Avg. Level Detected	Range of Detections	Violation	Year Sampled	Avg. Level Detected	Range of Detections	Violation	Year Sampled	
Chloroform (ppb)	na	2.62	1.27-3.96	na	2007	1.78	na	na	2007	By products of drinking water disinfection, measured at the point of entry to distribution system
Bromodichloromethane (ppb)	0	4.92	4.54-5.30	na	2007	3.87	na	na	2007	
Dibromochloromethane (ppb)	60	8.00	4.90-11.1	na	2007	7.57	na	na	2007	
Bromoform (ppb)	0	4.81	0.57-9.05	na	2007	6.85	na	na	2007	
Sulfate (ppm)	na	66	40-77	na	2006	50	48-52	na	2004	Erosion of natural deposits

#### \*Definitions

**Maximum Contaminant Level Goal or MCLG:** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

**Maximum Contaminant Level or MCL:** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

**Action Level or AL:** The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements which a water system shall follow.

**Treatment Technique or TT:** A required process intended to reduce the level of a contaminant in drinking water.

**Maximum Residual Disinfection Level or MRDL:** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of disinfectant is necessary for control of microbial contaminants.

**Maximum Residual Disinfection Level Goal or MRDLG:** The level of drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

**Turbidity:** Utilities who treat surface water are required to report on turbidity as an indication of the effectiveness of the filtration system. Turbidity is a measure of the cloudiness of water. The turbidity limit set by the EPA is 0.3 NTU in 95% of the daily samples and shall not exceed 1 NTU at any time. As reported in the table, GCWW's highest recorded turbidity result for 2007 was 0.10 NTU (Miller Water) and lowest monthly percentage of samples meeting the turbidity limits was 100%.

**The < symbol:** A symbol which means less than. A result of <5 means that the lowest level that could be detected was 5 and the contaminant in that sample was not detected.

**IDSE:** Initial Distribution System Evaluation

# FINANCIAL PROFILE

## STATEMENT OF NET ASSETS

FOR THE YEAR ENDED DECEMBER 31, (000'S OMITTED)

<b>Assets</b>	<b>2007 (Unaudited*)</b>	<b>2006</b>	<b>Change</b>
<b>Current Assets</b>			
Cash and Cash Equivalents	\$ 1,470	\$ 2,422	\$ (952)
Equity in City Treasury Cash	21,924	19,946	1,978
Receivables			
Accounts, Net	17,759	16,163	1,596
Accrued Interest	549	532	17
Due from Other Funds	353	535	(182)
Due from Other Governments	16,024	13,261	2,763
Prepaid Items	2,100	740	1,360
Inventory	4,606	4,122	484
Advances to Other Funds	105	157	(52)
Restricted Assets:			
Cash and Cash Equivalents	19,792	0	19,792
Equity in City Treasury Cash	1,684	10,336	(8,652)
Investments at Fair Value	32,688	27,436	5,252
<b>Noncurrent</b>			
Equity in City Treasury Cash	29,528	16,451	13,077
Restricted Equity in City Treasury Cash	2,268	8,525	(6,257)
Restricted Cash and Cash Equivalents	26,657	0	26,657
Accounts Receivable	1	49	(48)
Deferred Charges	2,872	1,992	880
Land	2,727	2,606	121
Buildings	194,724	187,545	7,179
(Accumulated Depreciation)	(67,676)	(63,338)	(4,338)
Improvements	527,455	488,134	39,321
(Accumulated Depreciation)	(63,055)	(57,956)	(5,099)
Machinery and Equipment	232,476	216,881	15,595
(Accumulated Depreciation)	(122,432)	(111,437)	(10,995)
Construction in Progress	88,832	96,765	(7,933)
<b>Total Assets</b>	<b>973,431</b>	<b>881,867</b>	<b>91,564</b>
<b>Liabilities</b>			
<b>Current</b>			
Accounts Payable	3,351	2,312	1,039
Due to Other Funds	467	437	30
Due to Other Governmental Agencies	757	754	3
Accrued Payroll	1,802	1,379	423
Accrued Interest	58	180	(122)
Compensated Absences Payable	3,017	3,129	(112)
Employee Reimbursements Payable	25	0	25
Unpaid Claims Payable	145	128	17
Ohio Public Works Commission Loans	128	99	29
Ohio Water Development Authority Loans	210	62	148
General Obligation Bonds Payable	4,600	6,550	(1,950)
Revenue Bonds Payable	13,620	11,335	2,285
Payable from Restricted Assets:			
Construction Contracts	3,699	5,121	(1,422)
Deposits Payable	1,508	1,638	(130)
<b>Noncurrent</b>			
Compensated Absences Payable	3,420	3,239	181
Net Pension Obligation	3,656	3,710	(54)
Net Other Post Employment Obligation	1,394	1,414	(20)
Deferred Bond Premium	14,260	11,063	3,197
Ohio Public Works Commission Loans	2,701	1,707	994
Ohio Water Development Authority Loans	5,131	1,246	3,885
Revenue Bonds Payable	332,635	273,265	59,370
General Obligation Bonds Payable	11,800	16,400	(4,600)
<b>Total Liabilities</b>	<b>408,384</b>	<b>345,168</b>	<b>63,216</b>
<b>Net Assets</b>			
Invested in Capital Assets, Net of Related Debt	484,054	476,877	7,177
Reserved for Restricted Assets	4,667	2,127	2,540
Unrestricted	76,326	57,695	18,631
<b>Total Net Assets</b>	<b>\$565,047</b>	<b>\$536,699</b>	<b>\$28,348</b>

\*Note: At the time of printing this Annual Report, the audit report of the City of Cincinnati, which includes the Greater Cincinnati Water Works, had not yet been approved and released by the Ohio Auditor of State. The audit report for the previous year is generally available by the beginning of the fourth quarter. For current information, please visit the Finance Department on the City's website at [www.cincinnati-oh.gov/](http://www.cincinnati-oh.gov/), then go to Annual Financial Reports or visit the State Auditor's website at [www.auditor.state.oh.us](http://www.auditor.state.oh.us) and use the Online Audit Search to select City of Cincinnati.



# STATEMENT OF REVENUES, EXPENSES & CHANGES IN FUND NET ASSETS

FOR THE YEAR ENDED DECEMBER 31, (000'S OMITTED)

<b>Operating Revenues</b>	<b>2007 (Unaudited*)</b>	<b>2006</b>
Metered Water Revenue	\$108,905	\$ 92,594
Service Charges	1,834	1,652
Nonmetered Water Revenue	170	231
Servicing Customers Installations	47	12
Miscellaneous Revenue	3,939	4,002
Operating Interest Revenue	383	463
Rental Income	133	137
Departments of Sewers and Stormwater Management for Billing and Collection Services	5,238	5,315
Mason Fees	542	577
Purchasing Agent Sales Revenue	53	76
<b>Total Operating Revenues</b>	<b>121,244</b>	<b>105,059</b>
<b>Operating Expenses</b>		
Personal Services	39,575	37,680
Contractual Services	8,530	7,328
Maintenance and Repair	4,550	3,135
Materials and Supplies	7,451	6,105
Utilities	11,639	9,752
Insurance	169	201
Taxes	2	48
Rent	823	1,037
Other	354	412
Depreciation and Amortization	21,806	21,402
Amortization Mason Agreement	72	69
<b>Total Operating Expenses</b>	<b>94,971</b>	<b>87,169</b>
<b>Operating Income</b>	<b>26,273</b>	<b>17,890</b>
<b>Nonoperating Revenues (Expenses)</b>		
Loss on Disposal of Fixed Assets	(52)	(628)
Interest Revenue	6,751	5,799
Interest Expense	(9,559)	(11,113)
<b>Nonoperating Revenues (Expenses)</b>	<b>(2,860)</b>	<b>(5,942)</b>
Income Before Contributions and Transfers	23,413	11,948
Capital Contributions	4,935	5,646
<b>Change in Net Assets</b>	<b>28,348</b>	<b>17,594</b>
Net Assets at January 1,	536,699	519,105
<b>Net Assets at December 31,</b>	<b>\$565,047</b>	<b>\$536,699</b>

# STATEMENTS OF CASH FLOWS, DIRECT METHOD

## FOR THE YEAR ENDED DECEMBER 31, (000'S OMITTED)

<b>Cash Flow From Operating Activities:</b>	<b>2007 (Unaudited*)</b>	<b>2006</b>
Receipts from Customers	\$ 117,043	\$ 105,982
Payments to Suppliers	(34,744)	(27,927)
Payments to Employees	(39,131)	(35,131)
Payments for Property Taxes	(2)	(48)
<b>Net Cash Provided (Used) by Operating Activities</b>	<b>43,166</b>	<b>42,876</b>
<b>Cash Flow From Non Capital Financing Activities:</b>		
Repayments of Advances Made to Other Funds	52	49
<b>Net Cash Used By Non Capital Financing Activities</b>	<b>52</b>	<b>49</b>
<b>Cash Flow From Capital &amp; Related Financing Activities:</b>		
Capital Contributed by Other Sources	110	419
Proceeds from Sale of Fixed Assets	265	55
Additions to Construction in Progress	(38,253)	(50,212)
Acquisition of Property, Plant and Equipment	(14,663)	(11,636)
Interest Paid on Bonds	(7,022)	(11,715)
Amortization Deferred Issuance Costs	(12)	0
Proceeds from Ohio Public Works Bonds	1,480	0
Proceeds from Ohio Water Development Authority Loans	4,167	1,339
Proceeds from Revenue Bonds	201,300	0
Principal Paid on Bonds	(146,195)	(19,475)
Principal Paid on Ohio Public Works Bonds	(99)	(99)
Principal Paid on Ohio Water Development Authority Loans	(134)	(31)
<b>Net Cash Used by Capital and Related Financing Activities</b>	<b>944</b>	<b>(91,355)</b>
<b>Cash Flow from Investing Activities:</b>		
Interest and Dividends on Investments	6,734	5,292
Investments Purchased	(5,253)	(910)
<b>Net Cash Provided by Investing Activities</b>	<b>1,481</b>	<b>4,382</b>
<b>Net Increase (Decrease) in Cash &amp; Cash Equivalents</b>	<b>45,643</b>	<b>(44,048)</b>
Cash and Cash Equivalents at Beginning of Year	57,680	101,728
<b>Cash and Cash Equivalents at End of Year</b>	<b>103,323</b>	<b>57,680</b>
<b>Reconciliation of Operating Income to Net Cash</b>		
<b>Provided (Used) by Operating Activities:</b>		
Operating Income	26,273	17,890
Depreciation and Amortization	21,879	21,471
Changes In Assets and Liabilities:		
(Increase) Decrease in:		
Receivables	(1,548)	(800)
Due from Other Funds	182	556
Due from Other Governments	(2,836)	1,168
Prepaid Assets	(1,360)	(427)
Inventory	(484)	(281)
Deferred Charge	(343)	0
Increase (Decrease) in:		
Accounts Payable	1,039	127
Accrued Payroll	424	111
Deposits Payable	(130)	436
Due to Other Funds	30	(4)
Due to Other Governments	3	167
Liability for Compensated Absences	68	381
Net Pension Obligation	(53)	1,705
Net Other Post Employment Obligation	(20)	352
Employee Reimbursements Payable	25	0
Estimated Liability for Unpaid Claims	17	24
<b>Net Cash Provided (Used) by Operating Activities</b>	<b>43,166</b>	<b>42,876</b>
<b>Schedule of Noncash Investing, Capital &amp; Financing Activities:</b>		
Acquisition of Property, Plant and Equipment from Contributed Capital	4,825	5,227
<b>Total Noncash Investing, Capital and Financing Activities</b>	<b>\$4,825</b>	<b>\$5,227</b>

\*Note: At the time of printing this Annual Report, the audit report of the City of Cincinnati, which includes the Greater Cincinnati Water Works, had not yet been approved and released by the Ohio Auditor of State. The audit report for the previous year is generally available by the beginning of the fourth quarter. For current information, please visit the Finance Department on the City's website at [www.cincinnati-oh.gov/](http://www.cincinnati-oh.gov/), then go to Annual Financial Reports or visit the State Auditor's website at [www.auditor.state.oh.us](http://www.auditor.state.oh.us) and use the Online Audit Search to select City of Cincinnati.



# NOTES TO FINANCIAL STATEMENTS

## DECEMBER 31, 2007

### SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The Greater Cincinnati Water Works is a municipally owned and operated utility. The financial statements of the Greater Cincinnati Water Works are included in the Comprehensive Annual Financial Report of the City of Cincinnati. An annual audit of the financial statements of the City of Cincinnati is performed by or at the direction of the Auditor of State.

**Deposits and Investments with Financial Institutions** — Cash balances of the Greater Cincinnati Water Works are included in a pool of City Treasury Cash. The City Treasurer determines the amounts to be kept on hand to meet current obligations and amounts and timing of investments. All deposits and investments by the City are insured by the Federal Deposit Insurance Corporation or some other instrumentality of the Federal government, or are covered by securities held by the City or its agent in the City's name.

**Accrued Interest Receivable** — Interest receivable on Greater Cincinnati Water Works funds has been accrued and recognized as revenue for 2007 and 2006; the amounts are \$549,000 and \$532,000 respectively.

**Inventories of Materials and Supplies** — Inventories are valued at cost which is determined on the moving average basis.

**Restricted Assets and Related Liabilities and Reserves** — Assets, the uses of which are restricted by City Council ordinance for improvements, extensions and construction of the system, are segregated on the balance sheet.

**Fixed Assets and Depreciation** — Fixed Assets are stated at cost and are depreciated by the straight-line method over estimated useful lives up to 100 years. Typical lives are as follows:

Buildings — 67 Years    Transmission and Distribution Mains — 100 Years    Machinery and Equipment — 3 to 30 Years

**Capitalization of Interest** — Interest is capitalized by the Greater Cincinnati Water Works when it is determined to be material. The Water Works capitalizes interest in accordance with Statement of Financial Accounting Standard No. 62, *Capitalization of Interest Costs in Situations Involving Certain Tax Exempt Borrowing and Certain Gifts and Grants*. The statement requires that the interest cost capitalized during construction be reduced by interest income earned on investments of the bond proceeds from the date of the borrowing until the assets constructed from the bond proceeds are ready for their intended use. The capitalized interest for December 31, 2007 was \$1,711,000 and for the year ending December 31, 2006, \$2,887,501.

**Compensated Absences** — NCGA Statement 4 requires state and local governments to recognize the liabilities associated with employees' compensated absences. Therefore, the following obligations have been included in the Greater Cincinnati Water Works Comparative Statement of Long-Term Liabilities:

**Vacation** — Vacation benefits are considered to be vested benefits of the employees. The obligation at December 31, 2007 for vacation benefits of Greater Cincinnati Water Works employees is approximately \$2,974,000.

**Sick Leave** — Sick leave benefits are included in the estimated liability for the employees, based upon the portion of accumulated sick leave liability that is estimated to eventually be paid as a retirement or death benefit. At December 31, 2007 this liability is approximately \$3,410,000 for Greater Cincinnati Water Works employees.

**Compensatory Time** — Employees are permitted to accumulate Compensatory Time for work in excess of their normal forty-hour week. The amount of the obligation at December 31, 2007 is \$53,000.

**The following is a Summary of the Changes in the Estimated Liability for Compensated Absences of the Greater Cincinnati Water Works for the year ended December 31, 2007 (000's omitted):**

	Accrued Vacation	Accrued Sick Pay	Compensatory Time	Total
Estimated Liability for Compensatory Absences January 1, 2007	\$2,932	\$3,371	\$66	\$6,369
Earned During 2007	2,126	1,297	(4)	3,419
Used/Forfeited During 2007	(2,084)	(1,258)	(9)	(3,351)
<b>Estimated Liability for Compensatory Absences December 31, 2007</b>	<b>\$2,974</b>	<b>\$3,410</b>	<b>\$53</b>	<b>\$6,437</b>

**Pension Plans** — Full-time employees of the Greater Cincinnati Water Works participate in one of two pension plans — either the Retirement System of the City of Cincinnati, administered by the City of Cincinnati, or the Public Employee's Retirement System (PERS), administered by the State of Ohio. The Greater Cincinnati Water Works contributions to the City-administered retirement system during 2007 and 2006 were \$5,840,000 and \$4,390,000 respectively. Contributions to PERS during 2007 and 2006 were \$288,000 and \$248,000 respectively. The actuary annually determines employer contributions to the City system for the current and following years. The actuarially computed value of vested and non-vested benefits on the plan's net assets available for plan benefits for each of the respective plans is not determined separately for the Water Works.

# NOTES TO FINANCIAL STATEMENTS (CONT.)

**Contributed Capital** — Contributions consist of facilities, or cash payments for construction of facilities, received from property owners and governmental agencies who receive benefit from such facilities. In accordance with GASB's Codification, Section G60.116, which allows (but does not require) enterprise funds to close out depreciation expense on contributed assets to "contributed capital" rather than to "retained earnings", the Greater Cincinnati Water Works has adjusted its Contributed Capital and Retained Earnings to reflect this option.

**Revenue** — Unbilled revenues on metered accounts are accrued at year-end. Rates are authorized by City Council based on operating costs and anticipated capital expenditures. A contract between the City and the Hamilton County Board of Commissioners specifies a differential between the rates for City and for Hamilton County consumers, declining from 55% to 25% over the life of the contract ending December 31, 2017. Rates applicable to residents of other counties and some municipalities in Hamilton County are negotiated separately.

## LONG TERM DEBT

**Long Term Debt** — This consists of General Obligation Bonds which are issued for the purpose of various Greater Cincinnati Water Works improvements. The bonds are self-supporting and serviced by water user charges; however, should the user charges be insufficient to cover debt service, the principal and interest are to be paid from the proceeds of the levy of ad valorem taxes on all property in the City without limitation as to the rate or the amount. The Greater Cincinnati Water Works issued Revenue Bonds for the first time during 2001. The Greater Cincinnati Water Works expects to finance future capital requirements utilizing revenue bonds. The annual requirements to amortize all debt outstanding as of December 31, 2007 is as follows (000's omitted):

	Year Ending December 31,	Total	Principal	Interest
Current	2008	\$35,253	\$18,220	\$17,033
Long Term	2009	32,360	16,000	16,360
	2010	32,374	16,700	15,674
	2011	32,196	17,260	14,936
	2012	32,204	18,070	14,134
	2013-2032	371,215	276,405	94,810
<b>Total Long Term</b>		<b>\$ 500,349</b>	<b>\$ 344,435</b>	<b>\$ 155,914</b>
		<u><b>\$ 535,602</b></u>	<u><b>\$ 362,655</b></u>	<u><b>\$172,947</b></u>

**As of December 31, 2007 and 2006 Long Term Debt consisted of the following (000's omitted):**

Bond	Original Principal Issue	Interest Rate (Percent)	Maturity Date	2007 Principal Outstanding	2006 Principal Outstanding
G-1240 replaces G-1162		5.375		\$0	\$350
G-1197	15,600	4.75	2007	0	1,600
G-1203	25,600	4.375	2008	2,600	5,200
G-1210	29,800	4.2	2014	13,800	15,800
S-2001	92,685	4.912	2021	16,595	77,275
S-2003	112,360	4.377	2023	25,105	100,315
S-2005A	80,585	4.188	2022	73,395	77,010
S-2005B	30,000	3.411	2025	30,000	30,000
S-2007A	124,415	4.2	2024	127,275	0
S-2007B	73,885	4.43	2032	73,885	0
<b>\$584,930</b>				<b>\$362,655</b>	<b>\$307,550</b>
<b>Less Current Maturity</b>				<b>(18,220)</b>	<b>(17,885)</b>
<b>Long Term Debt</b>				<u><b>\$344,435</b></u>	<u><b>\$289,665</b></u>



## OTHER CITY AGENCY TRANSACTIONS

**Metropolitan Sewer District and Storm Water Management** — The Greater Cincinnati Water Works provides billing and collection services of customers' accounts for the Metropolitan Sewer District and the Storm Water Management Utility. The charges for these services are recognized as revenue and included in the Statement of Revenue, Expense and Changes in Retained Earnings. During 2007 and 2006 the fees for these services were \$5,722,000 and \$5,315,000 respectively.

**Free Water** — The Greater Cincinnati Water Works provides free water service to the City of Cincinnati for municipal purposes. During 2007 and 2006 the values of these services were \$1,177,000 and \$1,073,000 respectively.

**Other City Agency Transactions** — The City provides various services to the Greater Cincinnati Water Works for which a fee is charged. These services include personnel, purchasing, legal service, etc. During 2007 and 2006 these fees were \$2,036,400 and \$2,018,700 respectively. Also, the City's Municipal Garage provides gasoline and maintenance service for Water Works vehicles. During 2007 and 2006 these fees were \$742,000 and \$1,185,000 respectively. In addition, the City's Regional Computer Center provides a variety of services for the Greater Cincinnati Water Works. The primary service provided to the Greater Cincinnati Water Works by the Regional Computer Center is billing and collection system support. During 2007 and 2006 the fees for these services were \$1,278,000 and \$1,208,000 respectively.

## OTHER ISSUES

In 1993, the Water Works entered into an agreement with the Hamilton County Board of Commissioners to extend water service to previously unserved, unincorporated areas of western Hamilton County. This agreement specifies that a portion of those water collections received from current customers in unincorporated areas of Hamilton County be segregated for the purpose of financing construction of the utility necessary to serve the additional customers. This amount is reflected as Due to Other Governments in the financial statements.

Activity Fund	January 1, 2007	Additions	Deductions	December 31, 2007
<b>Assets:</b>				
Equity in City Treasury Cash	\$1,277	\$892	\$2,090	\$79
<b>Liabilities:</b>				
Accounts Payable	\$0	\$2,090	\$2,090	\$0
Fund Balance	1,277	892	2,090	79
<b>Total Liabilities</b>	<b>\$1,277</b>	<b>\$2,982</b>	<b>\$4,180</b>	<b>\$79</b>

## USE OF UNAUDITED FINANCIAL STATEMENTS & STATUS OF AUDIT

At the time of printing this Annual Report, the audit report for the City of Cincinnati, which includes Greater Cincinnati Water Works, had not yet been approved and released by the State of Ohio. The audit report for the previous year is generally available by the beginning of the fourth quarter. For current information, please visit the Finance Department on the City's website at [www.cincinnati-oh.gov/](http://www.cincinnati-oh.gov/), then go to Annual Financial Reports, or the Auditor of the State of Ohio's website at [www.auditor.state.oh.us](http://www.auditor.state.oh.us) and select the Online Audit Search, then go to Search for Audits and select City of Cincinnati and the year desired.



"Cincinnati has at last secured for all time and at all times an adequate supply of water that well may be the envy of nearly every city in the United States."

The Cincinnati Enquirer  
1908

The California Treatment Plant, later renamed the Richard Miller Treatment Plant, was one of the first and only plants of its kind back when it was built in 1907. It continues to be a source of pride for the Greater Cincinnati Water Works. The Miller Plant is viewed as a model for cities throughout the world because it can turn a plentiful supply of river water into the highest quality drinking water. The Miller Plant and the Bolton Plant are outfitted with the best possible water treatment technologies and operated by highly knowledgeable and dedicated staff. These facilities supplied more than 53 billion gallons of water in 2007, which was tested more than 600 times a day, and distributed through 3,000 miles of water mains serving about 235,000 residential and commercial accounts in areas throughout the region.



GREATER CINCINNATI  
**WATER WORKS**

*A Service of The City of Cincinnati*

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Chester Park Complex, 4747 Spring Grove Ave., Cincinnati, Ohio 45232-1986  
513.591.7700, [www.cincinnati-oh.gov/gcww](http://www.cincinnati-oh.gov/gcww)